

A-

Tek
2712

27.00MHz
-20.0dBm
500.0kHz /
30kHz RBW

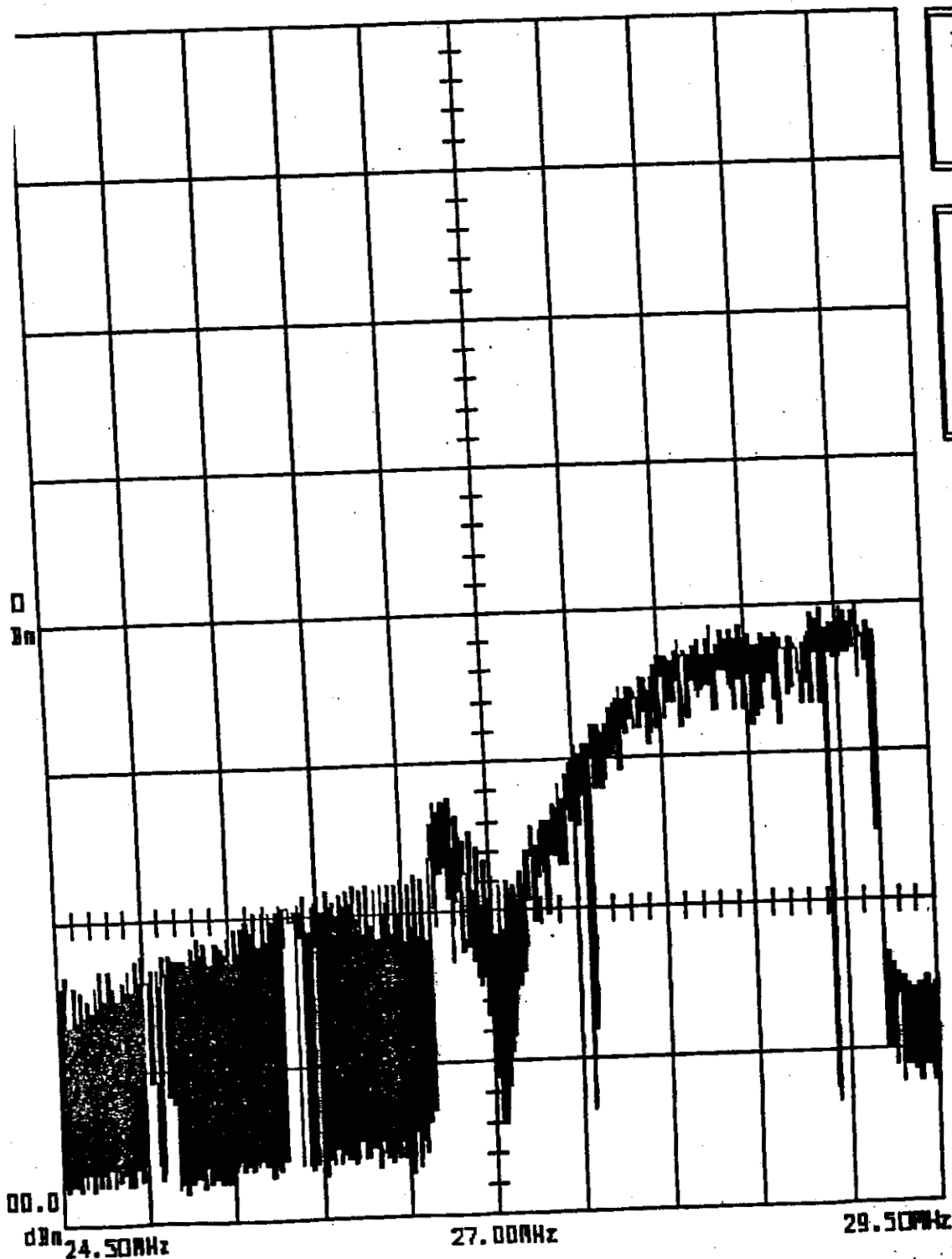
ATTN 10dB
VF 300Hz
10 dB /

TIME: 200 ns / DIV

MAX/MIN MODE

TIME: 15:57:23
DATE: 20-JUN-04

Note: Readouts
correspond to
waveform 'A'



Tek
2712

A-

27.1120MHz
-20.0dBm
200ms/ ZSPAN
30KHz RBW

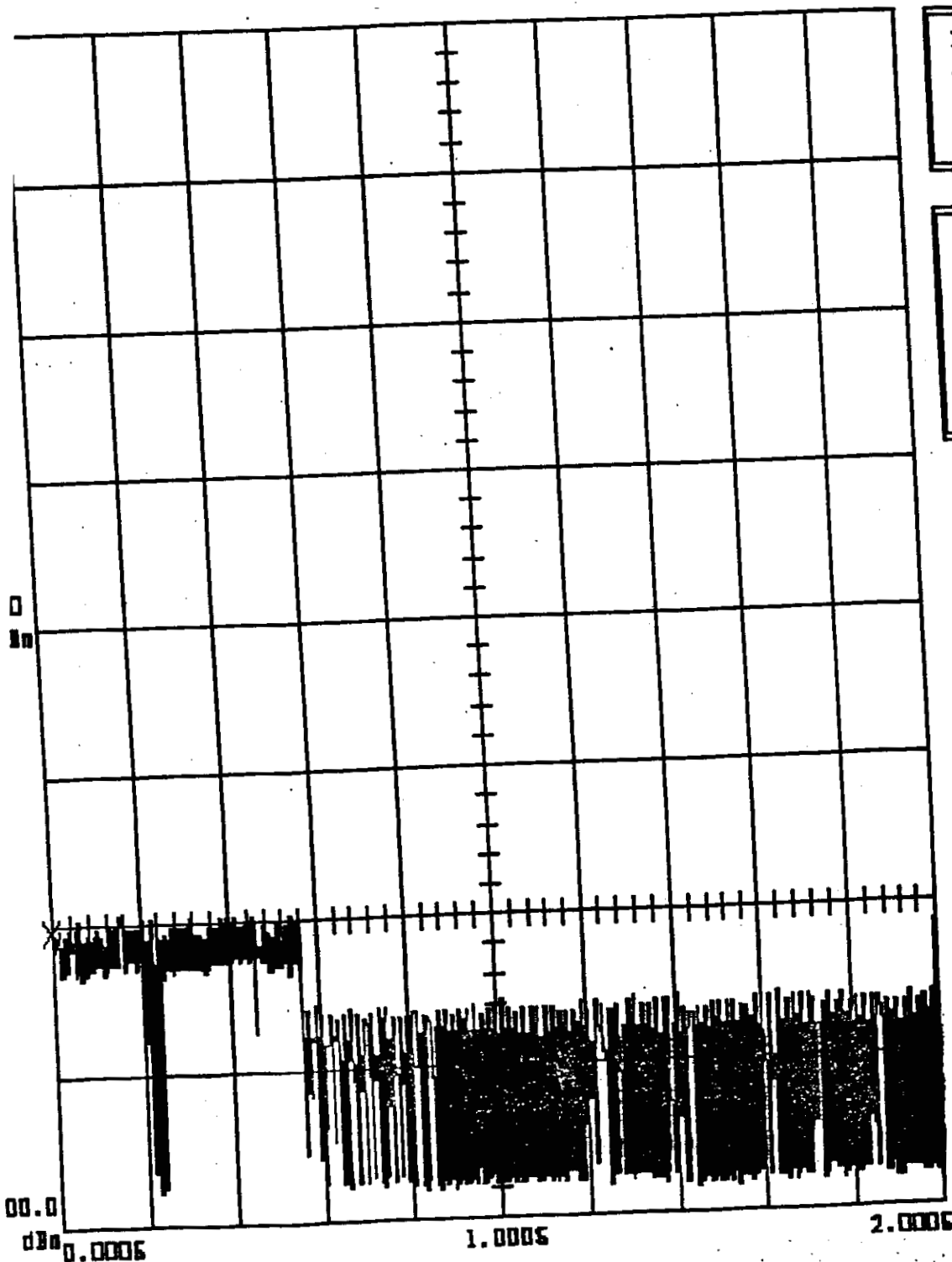
ATTN 10dB
VF 300Hz
10 dB/
A0.000S
A -80.4dBm

X- PARKER 1

MAX/MIN MODE

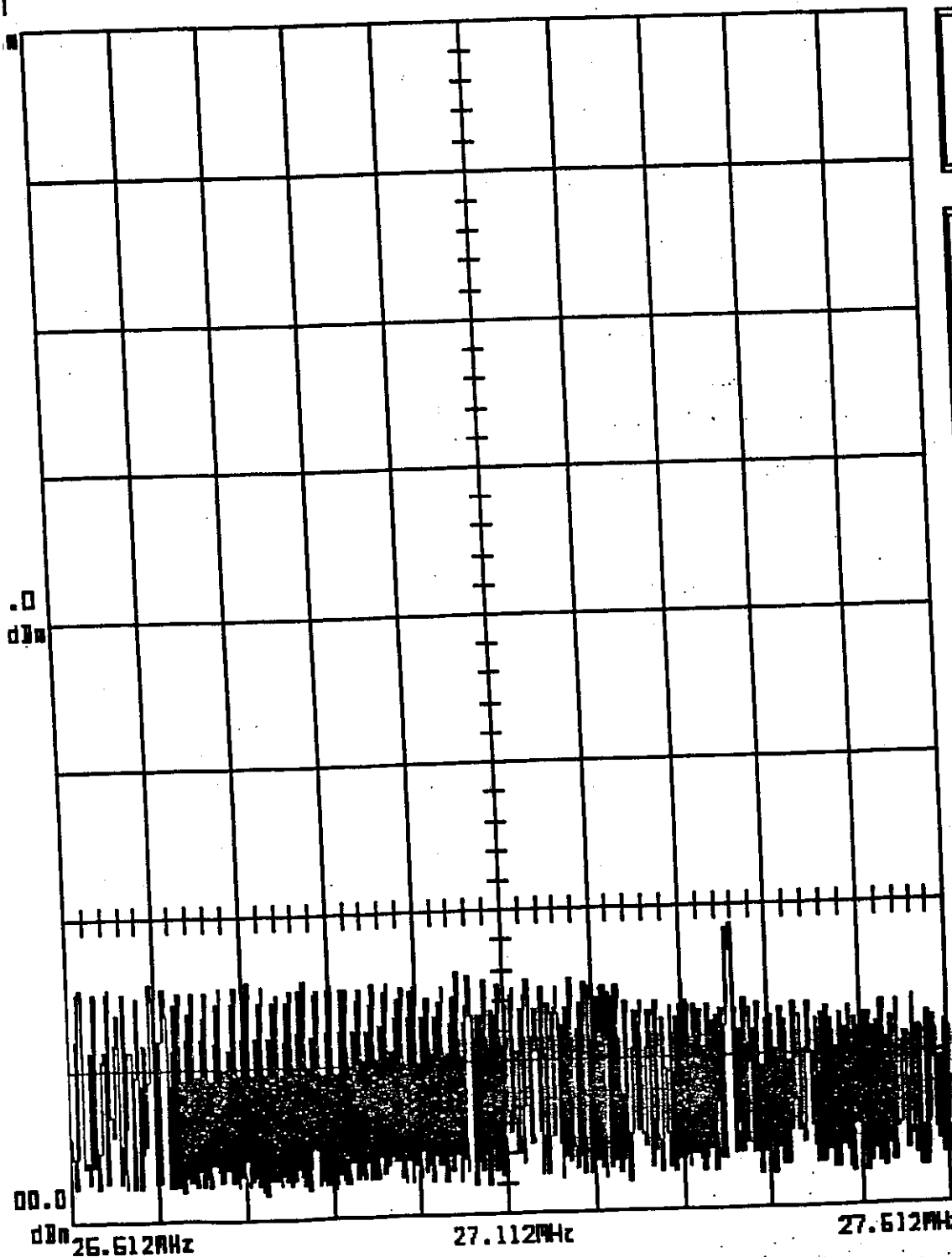
TIME: 15:30:51
DATE: 20-JUN-04

Note: Readouts
correspond to
waveform 'A'



Tek
2712

B-



27.112MHz
-20.0dBm
100.0kHz/
30kHz RBW

ATTN 10dB
VF 300Hz
10 dB/

TIME: 100 ns/DIV

MAX/MIN MODE

TIME: 15:33:26
DATE: 20-JUN-04

Note: Readouts
correspond to
waveform 'J'

Baseline Test Results Exhibit #1

The following baseline readings were recorded from the fixed station site of Mike Kinney, Call Sign KU7W, located at 1652 E. Sierra Drive Cottonwood, AZ. The reported S-meter reading recorded on January 10, 2004 and January 11, 2004 reflect fairly typical noise levels at this site at different times of the day in different frequency ranges as depicted in the baseline report. Highest reading recorded was S-8 on a vertical 10 through 40 meter antenna.

Equipment used in Exhibit #1:

Receiver- Icom IC 746 solid state
Mode- SSB
Bandwidth- 2.4 Khz filter
RF Gain- Maximum, as usually set
Pre-amp- Off

Antennas and feedline used in Exhibit #1:

Folded Dipole #1- Barker Williams 90 foot all band in an inverted V configuration- apex height 33 feet, end height 15 feet.

Feedline- LMR 400 Flex
Length- 73 feet
Distance to electrical distribution lines- 36 feet
Distance from house electrical system- 8 feet to 14 feet
Distribution lines are underground at this location

Vertical Antenna #2- Cushcraft R-8 vertical 10 through 40 meters

Feedline- LMR 400 solid
Length- 100 feet
Distance to electrical distribution lines- 36 feet
Distance to house electrical system- 17 feet
Distribution lines are underground at this location

MONITORING LOG FOR:

KU7W Mike Kinney Station Location- 1652 E. Sierra drive Cottonwood, Az.
(Mode- ssb) (RF Gain- Maximum)

Date	Local Time	Mode	Frequency Monitored	S- Level	Antenna
1/10/2004	8:11am		3.5 mhz- 4 mhz	S-1	Folded dipole
			3.5 mhz- 4 mhz	S-1	R-8 vertical
1/10/2004	8:22am		7 mhz- 7.3 mhz	S-1	Folded dipole
			7 mhz- 7.3 mhz	S-5	R8 vertical
1/10/2004	8:32am		10.1 mhz- 10.150 mhz	S-1	Folded dipole
			10.1 mhz- 10.150 mhz	S-5	R8 vertical
1/10/2004	8:40 AM		14 mhz- 14.350 mhz	S-0	Folded dipole
			14 mhz- 14.350 mhz	S-5	R-8 vertical
1/10/2004	8:50am		18.068mhz-18.168 mhz	S-0	Folded dipole
			18.068 mhz- 18.168 mhz	S-5	R-8 vertical
1/10/2004	8:59am		21 mhz-21.450 mhz	S-0	Folded dipole
			21 mhz- 21.450 mhz	S-1	R-8 vertical
1/10/2004	9:06am		24.890 mhz- 24.990 mhz	S-0	Folded dipole
			24.890 mhz- 24.990 mhz	S-6	R-8 vertical
1/10/2004	9:12am		28 mhz- 29.700 mhz	S-0	Folded dipole
			28 mhz- 29.700 mhz	S-4	R-8 vertical

Time ended 9:22 am

XX

1/10/2004	1:36 PM		3.5 mhz- 4.000 mhz	S-1	Folded dipole
			3.5 mhz- 4.000 mhz	S-0	R-8 vertical
1/10/2004	1:43 PM		7 mhz- 7.300 mhz	S-1	Folded dipole
			7 mhz- 7.300 mhz	S-4	R-8 vertical
1/10/2004	1:52 PM		10.100 mhz- 10.150 mhz	S-0	Folded dipole
			10.100 mhz- 10.150 mhz	S-2	R-8 vertical
1/10/2004	1:55 PM		14 mhz- 14.350 mhz	S-1	Folded dipole
			14 mhz- 14.350 mhz	S-1	R-8 vertical
1/10/2004	2:03 PM		18.068 mhz- 18.168 mhz	S-1	Folded dipole
			18.068 mhz- 18.168 mhz	S-3	R-8 vertical
1/10/2004	2:07 PM		21 mhz- 21.450 mhz	S-0	Folded dipole
			21 mhz- 21.450 mhz	S-2	R-8 Vertical

1/10/2004	2:13 PM	24.890 mhz- 24.990 mhz	S-1	Folded dipole
		24.890 mhz- 24.990 mhz	S-1	R-8 vertical

1/10/2004	2:17 PM	28 mhz- 29.700 mhz	S-0	Folded dipole
		28 mhz- 29.700 mhz	S-2	R-8 vertical

Time ended- 2:30 pm

XX

1/11/2004	8:16am	3.5 mhz- 4.000 mhz	S-0	Folded dipole
		3.5 mhz- 4.000 mhz	S-0	R-8 vertical

1/11/2004	8:22 AM	7 mhz- 7.300 mhz	S-1	Folded dipole
		7 mhz- 7.300 mhz	S-5	R-8 vertical

1/11/2004	8:29 AM	10.100 mhz- 10.150 mhz	S-0	Folded dipole
		10.100 mhz- 10.150 mhz	S-3	R-8 vertical

1/11/2004	8:33 AM	14 mhz- 14.350 mhz	S-0	Folded dipole
		14 mhz- 14.350 mhz	S-0	R-8 vertical

1/11/2004	8:39 AM	18.068 mhz- 18.168 mhz	S-0	Folded dipole
		18.068 mhz- 18.168 mhz	S-0	R-8 vertical

1/11/2004	8:42 AM	21 mhz- 21.450 mhz	S-0	Folded dipole
		21 mhz- 21.450 mhz	S-1	R-8 vertical

1/11/2004	8:47 AM	24.890 mhz- 24.990 mhz	S-0	Folded dipole
		24.890 mhz- 24.990 mhz	S-0	Folded dipole

1/11/2004	8:51 AM	28 mhz- 29.700 mhz	S-0	Folded dipole
		28 mhz- 29.700 mhz	S-0	R-8 vertical

Time ended- 9:00 am

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1/11/2004	3:31 PM	3.500 mhz-4.000 mhz	S-0	Folded dipole
		3.500 mhz- 4.000 mhz	S-0	R-8 vertical

1/11/2004	3:39 PM	7.000 mhz- 7.300 mhz	S-1	Folded dipole
		7.000 mhz- 7.300 mhz	S-7	R-8 vertical

1/11/2004	3:44 PM	10.100 mhz- 10.150 mhz	S-0	Folded dipole
		10.100 mhz- 10.150 mhz	S-7	R-8 vertical

1/11/2004	3:48 PM	14.000mhz- 14.350 mhz	S-0	Folded dipole
		14.000 mhz- 14.350 mhz	S-6	R-8 vertical

1/11/2004	3:58 PM	18.068 mhz- 18.168 mhz	S-1	Folded dipole
		18.068 mhz- 18. 168 mhz	S-5	R-8 vertical

1/11/2004	4:08 PM	21.000 mhz- 21.450 mhz	S-0	Folded dipole
		21.000 mhz- 21.450 mhz	S-4	R-8 vertical

1/11/2004 4:18 PM	24.890 mhz- 24.990 mhz	S-0	Folded dipole
	24.890 mhz- 24.990 mhz	S-0	R-8 vertical

1/11/2004 4:28 pm	28.000 mhz- 29.700 mhz	S-0	Folded dipole
	28.000 mhz- 29.700 mhz	S-2	R-8 vertical

Time ending 4:40 pm

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1/11/2004 7:02 PM	3.500 mhz- 4.000 mhz	S-4	Folded dipole
	3.500 mhz- 4.000 mhz	S-1	R-8 vertical

1/11/2004 7:11 PM	7.000 mhz- 7.300 mhz	S-4	Folded dipole
	7.000 mhz- 7.300 mhz	S-7	R-8 vertical

1/11/2004 7:17 PM	10.100 mhz- 10.150 mhz	S-1	Folded dipole
	10.100 mhz- 10.150 mhz	S-8	R-8 vertical

1/11/2004 7:23 pm	14.000 mhz- 14.350 mhz	S-1	Folded dipole
	14.000 mhz- 14.350 mhz	S-7	R-8 vertical

1/11/2004 7:29 PM	18.068 mhz- 18.168 mhz	S-0	Folded dipole
	18.068 mhz- 18.168 mhz	S-5	R-8 vertical

1/11/2004 7:37 PM	21.000 mhz- 21.450 mhz	S-0	Folded dipole
	21.000 mhz- 21.450 mhz	S-6	R-8 vertical

1/11/2004 7:47 PM	24.890 mhz- 24.990 mhz	S-1	Folded dipole
	24.890 mhz- 24.990 mhz	S-6	R-8 vertical

1/11/2004 7:56 PM	28.000 mhz- 29.700 mhz	S-0	Folded dipole
	28.000 mhz- 29.700 mhz	S-5	R-8 vertical

Time ending 8:12 pm

XX

Baseline Test Results Exhibit #2

The following baseline results were recorded from the fixed station site of Mike Kinney, Call Sign KU7W, located at 1652 E. Sierra Drive Cottonwood, AZ. The reported S-meter readings recorded on January 24, 2004 and January 25, 2004 reflect fairly typical noise levels at this site at different times of the day in different frequency ranges as depicted in the baseline report. Highest readings recorded were in the afternoon hours at S-5.

Equipment used in Exhibit #2:

Receiver- Icom IC 746 solid state
Mode- SSB
Bandwidth- 2.4 Khz Filter
RF Gain- Maximum, as usually set
Pre-amp- Off

Antenna and feedline used in Exhibit #2:

Folded Dipole- Barker Williams 90 foot all band in an inverted V configuration
apex height 33 feet, end height 15 feet.

Feedline- LMR 400 Flex
Length- 73 feet
Distance to electrical distribution lines- 36 feet
Distance to house electrical system- 8 feet to 14 feet
Distribution lines are underground at this location

VVARA BPL NOISE REPORT			
DATE	TIME	BAND	S-LEVEL
1-24-04	0953 local	160M	S-0
1-24-04	1000 local	80M	S-0
1-24-04	1011 local	40M	S-0 to S-3
1-24-04	1019 local	20M	S-0 to S-2
1-24-04	1029 local	17M	S-2 to S-3
1-24-04	1039 local	15M	S-0 to S-1
1-24-04	1049 local	12M	S-1 to S-3
1-24-04	1059 local	10M	S-0 to S-1
1-24-04	1110 local End		
1-25-04	1100 local	160M	S-0
1-25-04	1110 local	80M	S-0 to S-2
1-25-04	1120 local	40M	S-3 to S-5
1-25-04	1140 local	20M	S-0 to S-1
1-25-04	1151 local	17M	S-0 to S-1
1-25-04	1203 local	15M	S-0
1-25-04	1213 local	12M	S-1 to S-2
1-25-04	1223 local	10M	S-0 to S-2
1-25-04	1237 local End		
1-25-04	1558 local	160M	S-0
1-25-04	1609 local	80M	S-0 to S-3
1-25-04	1619 local	40M	S-2 to S-5
1-25-04	1630 local	20M	S-0 to S-2
1-25-04	1640 local	17M	S-2 to S-3
1-25-04	1651 local	15M	S-1 to S-3
1-25-04	1659 local	12M	S-3 to S-4
1-25-04	1710 local	10M	S-3 to S-4
1-25-04	1726 local End		
		160M	
		80M	
		40M	
		20M	
		17M	
		15M	
		12M	
		10M	

From: Michael W. Kinney KU7W 1652 E. Sierra
 Cottonwood, Az.
 Receiver- Icom IC-746, Mode-SSB, Bandwidth- 2400 Hz.
 Rf gain- Maximum

Baseline Test Results Exhibit #3

The following baseline results were recorded by Bob Shipton, K8EQC and Mike Kinney, KU7W from a mobile station at different locations throughout the Cottonwood area. It was made a point to take readings in some locations directly under or at power lines and also next to a power sub-station to obtain results in a worst case scenario. The highest S-meter readings in this particular baseline report were all recorded either directly sitting under main power lines or at the power sub-station where S-meter readings were highest of all. The readings were taken the afternoon of May 2, 2004. Highest readings recorded were taken at the sub-station location and ranged from S-5 to S-7 on all bands. The readings recorded in this particular exhibit is an instrumental part of this report as they characterize typical S-meter readings throughout the Cottonwood area from the same mobile station that was used in many of the other exhibits, actually recording BPL signal strengths. It is also instrumental in the fact that it demonstrates some worst case scenarios of power line noise in and around the Cottonwood vicinity. As will be seen in additional exhibits of actual signal strength readings taken after BPL was started up, the noise floor and interference levels from the BPL test sites, in the vicinity of the test sites, is significantly higher than any prior power line noise levels recorded prior to BPL coming on board in and around the Cottonwood area.

Equipment used in Exhibit #3:

Receiver- Icom IC 706MK11 solid state mobile
Mode- SSB
Bandwidth- 2.4 khz SSB Filter
RF- Gain- Maximum as usually set
Pre-amp- Off

Antenna and feedline used in Exhibit #3:

Antenna- Hustler 400 watt resonators for each band with 54 inch Hustler aluminum mast attached to the right rear corner of a 2003 Chevrolet pickup.
Feedline- 18 feet of RG-58- velocity factor of 66% and rated loss of 4.5 DB at 100 feet

VVARA BPL NOISE REPORT

DATE	TIME	BAND	S-LEVEL
5-2-04	1349 local	160M	
Main & 7th		80M	S-0
Street		40M	S-0
N34		20M	S-0
degrees			
44'39"		17M	S-0
W112		15M	S-0
degrees			
01'11"		12M	S-0
		10M	S-0
5-2-04		160M	
Old Town		80M	S-0
Jail		40M	S-0
N 34		20M	S-0
degrees			
44'58"		17M	S-4
W112		15M	S-1
degrees			
01'35"		12M	S-0
		10M	S-0
5-2-04		160M	
W. Pima &		80M	S-2
Main St.		40M	S-5
N34		20M	S-3
degrees			
44'48"		17M	S5
W112		15M	S-5
degrees			
01'68"		12M	S-4
		10M	S-1
5-2-04		160M	
Yucca &	APS	80M	S-7
Graham	Sub-Station	40M	S-6
		20M	S-6
N34			
degrees			
44'36"		17M	S-5
W112		15M	S-6
degrees			
02'34"		12M	S-6

		10M	S-5
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From: Michael W. Kinney KU7W & Bob Shipton K8EQC

Receiver- Icom IC 706MK11G

Mode- SSB

Bandwidth- 2.4 Khz filter

RF- Gain- Maximum as usually set

Pre-amp- Off

Antenna- Hustler 400 watt resonators for each band
with 54 inch Hustler aluminum mast attached to the right
rear corner of a 2003 Chevrolet pickup.

Feedline- 18 feet of RG-58 velocity factor of 66%
and rated loss of 4.5 DB at 100 feet.

VVARA BPL NOISE REPORT

DATE	TIME	BAND	S-LEVEL
5-2-04		160M	
3 rd & Main		80M	S-0
N34		40M	S-7
Degrees			
44'43"		20M	S-1
W112		17M	S-0
Degrees			
01'27"		15M	S-0
		12M	S-0
		10M	S-0
5-2-04		160M	
Mesquite		80M	S-1
& Pinal			
N34		40M	S-5
Degrees			
44'52"		20M	S-0
W112		17M	S-0
Degrees			
01'45"		15M	S-0
		12M	S-0
		10M	S-0
5-2-04		160M	
Verde		80M	S-1
Nekat &			
Gila St.		40M	S-5
N34			
Degrees		20M	S-5
44'34"		17M	S-3
W112			
Degrees		15M	S-0
01'53"		12M	S-0
		10M	S-0
		160M	
		80M	
		40M	
		20M	
		17M	
		15M	
		12M	

Baseline Test Results Exhibit #4

The following baseline readings were recorded on May 6, 2004 at 5:11 PM by Ernie Cummings, K6XF from his home location at 133 Lamplighter Village Clarkdale, AZ. GPS coordinates of this location are 34 degrees 45 minutes 17 seconds N by 112 degrees 03 minutes 45 seconds W. These readings are average S-meter signal strengths throughout the bands indicated.

Equipment used in Exhibit #4

Receiver- Kenwood TS 430S
Mode- SSB
Bandwidth- 2.4 K Khz filter
RF-Gain- Maximum
Pre-amp- no pre-amp

Antenna used in Exhibit #4

Antenna- End fed Zepp 65 feet long
Feedline- RG-8 25 feet to antenna
Distance to electrical distribution lines- 40 feet to underground lines
Distance to house electrical system- 23 feet

Band by meters

Noise on S-meter

160 meters	S-1
80 meters	S-2
40 meters	S-3
30 meters	S-2
20 meters	S-3
17 meters	S-1
15 meters	S-1
12 meters	S-1
10 meters	S-1

Baseline Test Results Exhibit #5

The following Baseline readings were recorded on January 12, 2004 beginning at 1800 Zulu by Mike Campbell K7NRA from his home location at 404 Lamplighter Village Clarkdale, AZ.

Measurements made on a calibrated Kenwood TS-430S radio. (WWV checked on AM and zero beat on both upper and lower sidebands at 10 Mhz.) Since we can't tune all the bands on the Hustler 4-BVT, I set the tuner like a noise bridge, that is, I tuned for maximum signal, then checked to see if the bypass function made any difference.

40 Meters

7160 Khz- S-1 to 1+
7260 Khz- S-1 to 1+

80 Meters

3750 Khz- S-0 to 1
3850 Khz- S-0 to 1
3995 Khz- S-0 to 1

160 Meters

1800 Khz- S-0
1900 Khz- S-0
2000 Khz- S-0

Local radio stations KYBC checked to set sensitivity reference at 1600 Khz. Signal was S-9 +30DB.

Baseline Test Results Exhibit #6

The following baseline readings were recorded on January 13, 2004 by Bob Shipton K8EQC from his home location.

Equipment Used:

Receiver- Icom IC 756 Pro
Mode- SSB
Bandwidth- 2.6 Khz
Antenna- Force 12 Triband DXer, 160 meter dipole which was used for the measurements on 160, 80 and 40 meters.
Feedline- RG8U on the beam
Mini 8U, 52 ohms on the Dipole
Underground utility service near the antenna
Distance to any utility wire from antenna approximately 50 to 75 feet.

Measurements:

1.8 to 2 Mhz- S-1 to 2

80 Meters- S-0

40 Meters- S-0

20 Meters- S-0

17 Meters- S-3

15 Meters- S-2.5

10 Meters- S-0

Baseline Test Results Exhibit #7

The following baseline readings were recorded on January 24, 2004 by Cal Turner, WI6S, from his home location of 985 Mingus Ave., Apartment 512 Cottonwood, AZ.

Equipment used:

Receiver- Kenwood TS-450 S
Mode- SSB
Bandwidth- 2.4 Khz.
Antenna- Random wire of 9 feet out the apartment window.
Feedline- 24 feet

Distance of antenna to apartment is 12 feet.
Distance of antenna from electrical distribution box is about 30 feet.
Electrical wiring serving complex is underground.

Measurements:

80 Meters- S-3 average
40 Meters- S-4 average
20 meters- S-3 average

Baseline Test Results Exhibit #8

The following baseline readings were recorded on January 9, 2004 by Rod Rosenbarger, KI6FH, from his home location of 1032 Zalesky Rd. Cottonwood, AZ.

Equipment used:

Receiver- Icom IC 756 Pro

Coax Belden RG-8 no more than 40 feet per run, 160 meters separate, 40 and 80 meters are on the same coax. Antennas are center fed inverted V's.

10 meters through 30 meters the antenna is a Butternut HF vertical.

The electrical wiring to the house is underground 40 feet from the antennas. Above ground wiring is across the street approximately 160 feet from the antennas.

Measurements: (Note: S-1= needle not moving) Mode- SSB

Time- 9:30 AM Local

160 Meters-	S-5 average
80 Meters-	S-1 across the band
40 Meters-	S-1 average
30 Meters-	S-1 across the bands
20 Meters-	S-1 average
17 Meters-	S-1 average
15 Meters-	S-1 average
12 Meters-	S-1 to S-2 average
10 Meters-	S-1

Time- 8:00 PM Local

160 Meters-	S-5
80 Meters-	
40 Meters-	S-1
30 Meters-	S-1 across band
20 Meters-	S-1
17 Meters-	S-1
15 Meters-	S-1
12 Meters-	S-1 across band
10 Meters-	S-1 across band

Baseline Test Results Exhibit #9

The following baseline readings were recorded on January 22, 2004 by Rod Rosenbarger, KI6FH, from his home location of 1032 Zalesky Rd. Cottonwood, AZ.

Equipment used:

Receiver- Icom IC 756 Pro

Coax Belden RG-8 no more than 40 feet per run, 160 meters separate, 40 and 80 meters are on the same coax. Antennas are center fed inverted V's.

10 meters through 30 meters the antenna is a Butternut HF vertical.

The electrical wiring to the house is underground 40 feet from the antennas. Above ground wiring is across the street approximately 160 feet from the antennas.

Measurements: (Note: S-1= needle not moving) Mode- SSB

Time- 2100 Zulu

160 Meters

1.800 Mhz- S-5
1.900 Mhz- S-5
1.975 Mhz- S-3

80 Meters

3.750 Mhz- S-1
3.900 Mhz- S-1
3.990 Mhz- S-1

40 Meters

7.000 Mhz- S-1
7.200 Mhz- S-1
7.290 Mhz- S-1

30 Meters

10.050 Mhz- S-1
10.300 Mhz0 S-1

20 Meters

14.000 Mhz- S-1
14.200 Mhz- S-1

14.349 Mhz- S-1

17 Meters

18.110 Mhz through 18.160 Mhz- S-1

15 Meters

21.000 Mhz through 21.450 Mhz- S-1

12 Meters

24.900 Mhz through 24.990 Mhz- S-1

10 Meters

28.100 Mhz through 29.990 Mhz- S-1

Conclusion:

It is the conclusion of the Verde Valley Amateur Radio Association BPL Interference Committee that the BPL system, sponsored by Electric Broadband and Arizona Public Service is in fact causing harmful interference to Amateur Radio users in the vicinity of the two test sites and most importantly causing harmful interference to the fixed site station of David Kiggins, KB7KMR who is located 0.56 miles from the Sawmill Cove BPL site and 0.71 miles from the American Heritage Academy BPL site.

The BPL signals are radiating from the power lines to the point of entirely wiping out the Amateur Radio frequency allocations to any user that may be within the close proximity of these test sites as depicted in the BPL test result exhibits included in this report. The BPL signals are covering virtually the entire Amateur Radio spectrum and everything else in between. If this technology is allowed to deploy throughout the community, Amateur Radio communications in the 1.8 Mhz through 30 Mhz spectrum will cease to exist which is particularly disturbing in the event of an actual disaster, terrorist attack, forest fires or any emergency that may occur and frequently does. Long range radio communication capability will cease to exist.

As federal, state and local authorities rely on help from the Amateur Radio Community in times of disasters, it is imperative that Amateur Radio communications not be impaired by this type of interference. This interference will not only affect the Amateur Radio users but also Military, FAA, other government agencies such as the Forest Service and the Red Cross and Salvation Army radio systems among other federally licensed users of this spectrum.

If allowed to deploy, the Broadband Over Power Lines proponents will have done nothing more than turn the power lines running throughout our community and the rest of the country into long wire antenna systems that are radiating everywhere and causing interference to Federally licensed users of the radio spectrum, as evidenced in this report. It should also be noted that if deployed, the power lines will not only be radiating these interference signals but also home or business internal wiring will also be radiating these types of interference signals as they are not shielded either which could be a real detriment to places such as Hospitals and Labs that use equipment, sensitive to RF energy.

In closing, it is the determination of the Verde Valley Amateur Radio Association BPL Interference Committee that Electric Broadband and Arizona Public Service needs to cease operations of the BPL test sites in the Cottonwood area immediately due to the interference issues being caused to Federally licensed users, as specifically stated in the FCC Rules and Regulations Part 15. On behalf of the Verde Valley Radio Association, we also demand that this BPL system **NOT** be started back up until the interference issues have been addressed and resolved.

Report prepared by: Mike Kinney KU7W- Verde Valley Amateur Radio Association

Verde Valley Amateur Radio Association Committee Members

Robert Shipton- K8EQC (Committee Chairman)

Licensed Amateur Radio Operator- 47 years

BS- Wayne State University, MA- Wayne State University

Graduate of Electronics Institute, AA Macomb County Community College

Worked in Avionics as aircraft radio repair and installation technician.

Taught High School for 7 years.

Held Second Class Radio Telephone License doing marine Radio HF Repairs.

President and CEO of Xytek Industries an accredited A2LA Testing Laboratory doing:

1. Vibration, shock and temperature testing on military and automotive components
2. Xytek also sells worldwide, reconditioned Environmental Test Equipment.
3. Xytek also does instrument repair and calibration

Michael (Mike) Kinney- KU7W

Licensed Amateur Radio Operator- 27 years Extra Class License

Regional Manager for Major Propane Gas Company

Communications Education- 2 years College in Electronics

Thomas Schrumm- K7NII

Licensed Amateur Radio Operator- 44 years

Participates in Earth, Moon, Earth (EME)

Has done extensive RF measurements including bandwidth and noise figure calculations on VHF and UHF equipment.

Participated in experiments with Stanford University and Sandia Labs on propagation of RF signals

BS EE

Norman Vandiver- N7VF

Lifetime in electronics starting as a technician in maintenance and calibration of precision test equipment in a Boeing Laboratory in Seattle, WA.

Went to RCA Service Company as a technician in a PMEL Laboratory in Anchorage, AK.

31 years with White's Electronics starting as an engineering technician and retired as General Manager.

Bob Thompson- KC8BOB

USAF 4 years as an airborne radar repairman

Pilot- Commercial, instrument, airplane

BS- Mathematics, Computer Science

Ford Motor Company- 30 years in mechanical engineering, instrumentation, anti-lock system design engineer

LDW & Associates- 6 years as engineering manager. Developed an acoustical noise acquisition system.

Have built many kits and circuits (computer, TV, RC proportional system, test instruments, Etc.)

James Michael (Mike) Wingate- WA6LSE

Received electronics education at Chaffey Junior College in California and California State Polytechnic University in Southern California.

40 years experience in electronics and fire fighting.

Holds FCC General Radio Telephone license, held an FAA certified radio technician certification and Amateur Radio Extra Class License.

Specialist in Incident management and deployment of emergency communication systems.

Worked on many interagency programs and with agencies such as FCC, US Border Patrol, US Drug Enforcement Administration, Federal Emergency Management Agency, Department of Homeland Security and California Department of Forestry and Fire protection.

Principle in the design and implementation of the communications systems for the Urban Search and Rescue teams.

Worked with foreign governments negotiating complex resolutions, most recently with the government of Mexico resolving mutual border radio interference issues.

Currently CEO for Verde River technologies, a company that specializes in products and technical services for public safety communication systems.

(Floyd) Ernie Cummings- K6XF

United States Air Force, Vandenburg AFB, California- Communications management Specialist and contracting officer for the United States of America under the authority of subpart 1.6 of the Federal Acquisition regulation at the Western Space and Missile Center, Data Transfer Directorate for 6 years in the Operations/Communications Division at Vandenburg AFB, Ca.

U>S. Department of State, USINFO.STATE.GOV- 4 years assigned as one off 11 Telecommunications Officers in the foreign service and responsible for installing and maintaining communication systems at more than 140 world-wide American Embassy and Consulates.

National Aeronautics and Space Administration- With NASA Dryden Flight Research Center, EAFB, CA for 20 years. Served as group leader and supervisor of the NASA-DFRC communication facility in support of programs, operational and maintenance, conducted singularly or jointly by NASA and other government agencies, military or contractor groups. Also appointed as technical representative for NASA.

Eric Sacher- AB7ES

President and founder of Serendipity Systems that was founded in 1984 to provide the Automatic Test Equipment and electronics manufacturing community with test products and engineering services.

Prior to founding Serendipity Systems Eric was Vice President of marketing for Cirrus Computers Limited, USA and marketing director for General Designs, Inc.

Previous to Cirrus computers he spent 4 years with Ominicomp, Inc where he played a key role in the development of the widely used GenRad 2225/2235 series of portable service testers.

Eric has particular expertise in computer-controlled ATE systems, having developed test program translation, test generation, logic simulation, fault dictionary and guided probe fault isolation software packages as well as operating system software. Eric has 3 patents in the field, one of which (#4,194,113) is the basis of the loop-breaking guided-probe algorithm used on the GenRad 2225/2235.

Eric has published numerous papers in the testing field, including several at both IEEE International Test Conference and IEEE Autotestcon. He is a member of The Institute of Electrical and Electronic Engineers (IEEE) and is a member of the IEEE Standards Association.

Mark Hills- KD7KJL

22 years television and radio broadcasting experience in Michigan and Arizona. 20 years in business servicing consumer, aviation, computer and specialty electronics.

1999-2000- Apogeo de Phoenix—Engineer with responsibilities for installation and maintenance of transmitters, Beta Tape machines, servers, RGB switchers computer systems, phone systems, microwave, audio and digital editing systems, budgets, equipment ordering and selection and FCC paperwork.

1996-1999- Regent Communications- Engineer- Responsible for installation and maintenance of radio station equipment such as AM and FM transmitters, audio consoles, cart machines, phone systems, digital production equipment.

1989-1998- Delta College, University Center, MI- Engineer- Responsible for installation, maintenance and operation of all types of equipment related to broadcasting and telephony including but not limited to UHF transmitters, microwave, satellite, switchers, audio consoles, cameras, tape machines, digital phone PBX's, Codec's, computers, voice mail systems, fiber, TI, Interactive classrooms, audio visual equipment ITFS systems and refrigeration.

1983-1989- Meredith Corp. WNEM Saginaw, MI- Engineer responsible for installation, maintenance and operation of all types of broadcast equipment including VHF transmitters, microwave, satellite, audio and video switchers, audio consoles, cameras, remote vehicles, tape machines and character generators.

Self employed as Genesis Electric (1978-1998) Marca Electric (2000-2004) - Business consists of installation, service and maintenance of consumer and industrial electronics, refrigeration systems. Airport navigational systems including Nondirectional Beacons and ILS systems, all types of computer systems, telephony and CATV systems. Presently contracted to service 4 FM and 2 AM Broadcast stations on a full time basis.

FCC General Class License- Pilots license, single engine/Gyroplane

FCCTechnician Class Amateur License- KD7KJL

Fluent in Microsoft 95,98, Office 2000, Session, Matrox, Fast and most other software programs.

Certified by FAA in Wilcox 1260 SDF and Southern Avionics NDB transmitters.

Certified Microsoft A+ Computer Technician.

Bill Jackson- KC7ILX

Steve Pearson- KC7TIL

Mel Boreham- N6BDC

Rod Rosenbarger- KI6FH